



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/648,830	08/25/2000	Martin J. Steffensmeier	00CR002/KE	6297

7590 01/18/2007
Rockwell Collins Inc
Intellectual Property Department
400 Collins Road NE M/S 124-323
Cedar Rapids, IA 52498

EXAMINER

NGUYEN, KEVIN M

ART UNIT	PAPER NUMBER
----------	--------------

2629

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
2 MONTHS	01/18/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.



UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 09/648,830
Filing Date: August 25, 2000
Appellant(s): STEFFENSMEIER ET AL.

MAILED

JAN 18 2007

Technology Center 2600

STEFFENSMEIER ET AL.
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 10/20/2006 appealing from the Office action mailed 6/21/2006.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

No amendment after final has been filed.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

4,127,796	HENDERSON	11-1978
5,821,917	CAPPELS	10-1998
6,369,851	MARFLAK ET AL.	04-2002

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3, 5-10, 12-17, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Henderson (newly cited, US 4,127,796) in view of Cappels (newly cited, US 5,821,917).

3. As to claim 1, Henderson teaches a method of reducing luminance decay of emissive elements in a matrix addressed emissive display device (CRT display anti-burn circuit, see the title), the method comprising:

generating control data [13,16, Fig. 1] corresponding to a static image [a stationary image, abstract, line 3] to be displayed [on a CRT 1] and generating drive signals [21, 22] as a function of the control data [13,16] in a drive circuit [10,12 see col. 2, line 27 through col. 3, line 2], wherein the control data defines an image origin [23, Fig. 2] of the static image with respect to a display origin [23, Fig. 2, col. 3, lines 3-22];

providing the drive signals [21,22] to the matrix [Fig. 3] to thereby energize the corresponding emissive display elements [the CRT 1] of the matrix in order to display the static image on the matrix [the stationary image, abstract, line 3, Fig. 3];

altering the control data [15,18], substantially continuously, such that the drive signals [21,22] are substantially continuously altered to thereby substantially continuously move the static image [the stationary image is deviated at a sufficiently slow rate, see Figs. 2 and 3] on the matrix in a manner which is substantially undetectable to viewers of the display device [and over a sufficiently small distance that said deviation is not perceptible to the human eye, see claim 8], wherein the control data [15,18] is altered by rendering the image original [28] of the static image with respect to the display original [28, see Figs. 2 and 3, col. 3, lines 3-58].

Accordingly, Henderson teaches all of the claimed limitation, except for the method comprising: generating/altering in a graphic engine or processor control data.

However, Cappels teaches a related system and method of compensating for the effects of aging of the phosphors upon color accuracy in a CRT which comprises graphics engine, e.g., a host processor 10 and an internal processor 23 generating/altering control image data (see Fig. 2, col. 4, lines 1-27).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to implement the host processor 10 and internal processor 23 (corresponding to the graphics engine as claimed) as taught by Cappels in the Henderson's CRT in order to achieve the benefit of provide an improved a system and method is needed to compensate accurately for degradation of color in cathode ray tubes due to phosphor and faceplate aging (see Cappels, col. 2, lines 48-50).

4. The limitation of claim 8 are similar to those of claim 1, though in apparatus form, therefore the rejection of claim 8 will be treated using the same rationale as claim 1.

Art Unit: 2629

5. As to claim 5, Henderson teaches wherein generating control data corresponding to the static image to be displayed on the matrix of individually addressable emissive display elements further comprises:

defining the image origin [28] of the static image; assigning the image origin for the static image to an emissive display element in the matrix [Fig. 3];

generating the control data for each emissive display element in the matrix based upon its respective position relative to the emissive display element to which the image origin [28] has been assigned [see claim 1 above].

6. As to claims 6 and 13, Henderson teaches wherein assigning the image origin further comprises initially assigning the image origin [28, Fig. 3] for the static image [the stationary image, abstract, line 3] to the display origin [28, Fig. 3].

7. As to claims 7 and 14, Henderson teaches wherein altering the control data further comprises reassigning the image origin [28, Fig. 3] for the static image [the stationary image, abstract, line 3] to a different emissive display element in the matrix such that the image origin moves relative to the display origin [the stationary image is deviated at a sufficiently slow rate, and over a sufficiently small distance that said deviation, see Figs. 2 and 3, col. 3, lines 3-58].

8. As to claim 15, Henderson teaches a matrix addressed emissive display device [a CRT 1], comprising:

a matrix of individually addressable emissive display element (the CRT, fig. 1);

graphics means [inherently] for controlling the matrix to display a static image [a stationary image, abstract, line 3] on the matrix [Fig. 3] and to substantially continuously

Art Unit: 2629

move the static image on the matrix in a manner which is substantially undetectable to the viewers of the display device [the stationary image is deviated at a sufficiently slow rate, and over a sufficiently small distance that said deviation is not perceptible to the human eye, see Figs. 2 and 3, claim 8], wherein the graphic means includes a graphic engine means [inherently] for generating control data [13, 16] associated with the static image [the stationary image, abstract, line 3], the image having an image origin [28, Fig. 3] and wherein the graphics means includes a display driver means [10, 12, Fig. 1] for driving the display elements [the CRT] in response to the graphics engine means, wherein the graphic engine means redefines the image origin [28] to move the static image [the stationary image is deviated at a sufficiently slow rate, and over a sufficiently small distance that said deviation, see Figs. 2 and 3, col. 3, lines 3-58].

Accordingly, Henderson teaches all of the claimed limitation, except for the CRT comprising: a graphic engine or processor generating/altering control data.

However, Cappels teaches a related system and method of compensating for the effects of aging of the phosphors upon color accuracy in a CRT which comprises graphics engine, e.g., a host processor (10) and an internal processor (23) generating/altering control image data (see Fig. 2, col. 4, lines 1-27).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to implement the host processor 10 and internal processor 23 (corresponding to the graphics engine as claimed) as taught by Cappels in the Henderson's CRT in order to achieve the benefit of provide an improved a system and

Art Unit: 2629

method is needed to compensate accurately for degradation of color in cathode ray tubes due to phosphor and faceplate aging (see Cappels, col. 2, lines 48-50).

9. As to claims 12 and 19, the combination of Henderson and Cappels teaches wherein graphics means is adapted to define the image origin [28, Fig. 3] for the static image [the stationary image, abstract, line 3] and to assign the image origin [28] for the static image to an emissive display element in the matrix, the graphics further adapted to generate control data [13, 16] for each emissive display element in the matrix [the CRT 1] based on its respective position relative to the emissive display element to which the image origin has been assigned [see claim 15 above].

10. Claim 20 shares the same limitations as those of claim 19 and therefore the rationale for rejection will be the same.

11. As to claims 2, 3, 9, 10, 16 and 17, Henderson teaches all of the claimed limitation of claims 1, 8 and 15, except wherein the matrix is a plasma display device and light emitting diodes.

However, Cappels further teaches other display devices such as plasma displays and light-emitting diodes having various signal-receiving electrodes may be used in place of CRTs (col. 6, lines 38-45).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to implement other application display devices, e.g., the plasma display devices and light emitting diodes as taught by Cappels for the intended use of CRT of Henderson, because this would provide an improved a system and method is

Art Unit: 2629

needed to compensate accurately for degradation of color in cathode ray tubes due to phosphor and faceplate aging (see Cappels, col. 2, lines 48-50).

12. Claims 4, 11 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Henderson in view of Cappels, and further in view of Marflak et al (previously cited, US 6,369,851) hereinafter Marflak.

As to claims 4, 11 and 18, the combination of Henderson and Cappels teaches all of the claimed limitation of claims 1, 8 and 15, except wherein a field effect display matrix.

However, Marflak teaches a flat cathode ray tube 308 (see fig. 3) corresponding to a field effect display matrix.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to implement other application display devices, e.g., flat cathode ray tube corresponding to the field effect display matrix as taught by Marflak for the intended use of CRT of Henderson and Cappels, because this would minimize burn lines on the field effect display matrix (see the title of Marflak).

(10) Response to Argument

A. Ground of Multiple references rejection:

Although the invention is not identically disclosed or described as set forth in 35 U.S.C.102, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a designer of ordinary skill in the art to which said subject matter pertains, the invention is not patentable.

Art Unit: 2629

This modification of the primary reference in light of the secondary reference is proper because the applied references are so related that the appearance of features shown in one would suggest the application of those features to the other. See *In re Rosen*, 673 F.2d 388, 213 USPQ 347 (CCPA 1982); *In re Carter*, 673 F.2d 1378, 213 USPQ 625 (CCPA 1982), and *In re Glavas*, 230 F.2d 447, 109 USPQ 50 (CCPA 1956). Further, it is noted that case law has held that one skilled in the art is charged with knowledge of the related art; therefore, the combination of old elements, herein, would have been well within the level of ordinary skill. See *In re Antle*, 444 F.2d 1168, 170 USPQ 285 (CCPA 1961) and *In re Nalbandian*, 661 F.2d 1214, 211 USPQ 782 (CCPA 1982).

In response to appellant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Appellant argues that "insufficient to make out to establish a prima facie case of obvious". In response, Examiner respectfully disagrees because a prima facie case of obvious is established when the teachings from the prior art itself would appear to have suggested the claimed subject matter to a person of ordinary skill in the art. Once such a case is established, it is incumbent upon appellant to go forward with objective evidence of unobviousness. See *In re Fielder*, 471 F.2d 640, 176 USPQ 300 (CCPA

Art Unit: 2629

1973). See In re Palmer, 172 USPQ 126 (CCPA 1971). See In re Reven, 156 USPQ 679 (CCPA 1968).

When the reference relied on expressly anticipates or makes obvious all of the elements of the claimed invention, the reference is presumed to be operable. Once such a reference is found, the burden is on appellant to provide facts rebutting the presumption of operability. *In re Sasse*, 629 F.2d 675, 207 USPQ 107 (CCPA 1980). See also MPEP § 716.07.

Where, however, the specification is silent as to what constitutes equivalents and the examiner has made out a prima facie case of equivalence, the burden is placed upon the appellant to show that a prior art element which performs the claimed function is not an equivalent of the structure, material, or acts disclosed in the specification. See *In re Mulder*, 716 F.2d 1542, 1549, 219 USPQ 189, 196 (Fed. Cir. 1983). If the appellant disagrees with the inference of equivalence drawn from a prior art reference, the appellant may provide reasons why the appellant believes the prior art element should not be considered an equivalent to the specific structure, material or acts disclosed in the specification. Such reasons may include, but are not limited to: (A) Teachings in the specification that particular prior art is not equivalent; (B) Teachings in the prior art reference itself that may tend to show nonequivalence; or (C) 37 CFR 1.132 affidavit evidence of facts tending to show nonequivalence.

In response to appellant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention

Art Unit: 2629

where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the motivations have been provided at each end of the combination references.

B. Ground of Henderson in view of Cappels rejection:

Appellant argues with respect to claim 1 at pages 8-14, the combination of Henderson and Cappels fails to teach claim 1 recited "[a] method of reducing luminance decay of emissive elements in a matrix addressed emissive display device, the method comprising: generating in a graphics engine control data corresponding to a static image to be displayed and generating drive signals as a function of the control data in a drive circuit, wherein the control data defines an image origin of the static image with respect to a display origin; providing the drive signals to the matrix to thereby energize the corresponding emissive display elements of the matrix in order to display the static image on the matrix; and altering in the graphics engine the control data, substantially continuously, such that the drive signals are substantially continuously altered to thereby substantially continuously move the static image on the matrix in a manner which is substantially undetectable to viewers of the display device, wherein the control data is altered by redefining the image origin of the static image with respect to the display origin." See arguments at pages 8-14. In response, the examiner respectfully disagrees. As stated *supra* with respect to claims 1 and 8, see rejection of paragraphs 2, 3, and 4 as explained in greater details above.

In response to Appellant's argument of the remarks at pages 15-18 with respect to claim 15, the combination of Henderson and Cappels fails to teach claim 15 recited "[a] matrix addressed emissive display device, comprising: a matrix of individually addressable emissive display elements; and graphics means for controlling the matrix to display a static image on the matrix and to substantially continuously move the static image on the matrix in a manner which is substantially undetectable to viewers of the display device, wherein the graphic means includes a graphic engine means for generating control data associated with the static image, the image having an image origin and wherein the graphics means includes a display driver means for driving the display elements in response to the graphic engine means, wherein the graphic engine means redefines the image origin to move the static image. The examiner is not convinced by Appellant's argument. As stated *supra* with respect to claim 15, see rejection of paragraph 8 as explained in greater details above.

In response to Appellant's argument of the remarks at page 19, the combination of Henderson and Cappels fails to teach with respect to claims 5-7,12-14, 19 and 20. The examiner is not convinced by Appellant's argument. As stated *supra* with respect to claims 5-7,12-14, 19 and 20, see rejection as explained in greater details above.

With respect to dependent claims 5-7,12-14, 19 and 20 at page 19, appellant argues the dependent claims with the only emphasis of the recitation in the independent claims 1, 8 and 15. In response, the examiner respectfully submits that the appellant's argument based on the dependent claims is not persuasive; therefore, the response is

Art Unit: 2629

mooting the ground of rejection of independent claims 1, 8 and 15 as explained in greater details above.

B. Ground of Henderson in view of Cappels, and further in view of Marflak rejection:

With respect to dependent claims 4, 11 and 18 at pages 21-34, appellant argues the dependent claims with the only emphasis of the recitation in the independent claims 1, 8 and 15. In response, the examiner respectfully submits that the appellant's argument based on the dependent claims is not persuasive; therefore, the response is mooted the ground of rejection of independent claims 1, 8 and 15 as explained in greater details above.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,



Kevin M. Nguyen


Patent Examiner

Conferees:

Richard Hjerpe






RICHARD HJERPE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600

KEE M. TUNG
SUPERVISORY PATENT EXAMINER